

BLISHCHENKO, I.P.; BOCHAROV, I.N.; GLUSHAKOV, P.I.; MIRONOV, V.S.;
NIKOL'SKIY, M.M.; NIKOL'SKIY, N.M.; PUCHKOV, I.B.; CHERNIKOV,
G.P.; SHCHETININ, V.D.; YEFIFANOV, M.P., red.; ROMANOVA, N.I.,
tekhn.red.

[Africa 1960: concise reference book; territory, population,
economy, governmental system, foreign policy] Afrika 1960;
kratkii spravochnik. Territoria, naselenie, ekonomika, gosu-
darstvennyi stroi, vneshniaia politika. Moskva, Izd-vo In-ta
mezhdunarodnykh otnoshenii, 1960. 133 p.

(MIRA 14:3)

(Africa)

ASOYAN, N.S.; GAVRILOV, N.I.; GORNUNG, M.B.; KREMEN', K.S.; OLEYNIKOV, I.N.; PUCHKOV, I.B.; CHERNIKOV, G.P.; ZABIROV, B.Sh., red.; KOSTINSKIY, D.N., red.; ZHURAVLEVA, G.P., mlad. red.; GOLITSYN, A.V., red. kart; BURLAKA, N.P., tekhn. rea.

[Countries of West Africa; geographical information] Strany Zapadnoy Afriki; geograficheskie spravki. Moskva, Geografiz, 1962. 47 p. (MIRA 15:7)

(Africa, West--Geography, Economic)

1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31 32 33 34 35 36 37 38 39 40 41 42 43 44 45 46 47 48 49 50 51 52 53 54 55 56 57 58 59 60 61 62 63 64 65 66 67 68 69 70 71 72 73 74 75 76 77 78 79 80 81 82 83 84 85 86 87 88 89 90 91 92 93 94 95 96 97 98 99 100

TEST AND PROPERTIES INDEX

9

Quenching liquid for tempering instruments. V. N. Korzhinskii, I. G. Puchkov, G. I. Ponom and G. Felerbaum. *Nauka Tekhnika* 1937, No. 17, 21 2. Various instruments of steel were heated at 1250 80° or 770 90° (depending on the kind of steel and instrument) for 2 3 or 20 min., resp., and tempered with an aq silicate soln of d. 1.14-1.16. After tempering, steel should be washed with water to remove the film of silicate. A. A. Polgorny

AS - 15.4 - METALLURGICAL LITERATURE CLASSIFICATION

1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31 32 33 34 35 36 37 38 39 40 41 42 43 44 45 46 47 48 49 50 51 52 53 54 55 56 57 58 59 60 61 62 63 64 65 66 67 68 69 70 71 72 73 74 75 76 77 78 79 80 81 82 83 84 85 86 87 88 89 90 91 92 93 94 95 96 97 98 99 100

KRYTOV, K.Ye.; PUCHKOV, I.M.; KARAVAYEV, V.I.

Machine for making concrete curbstones [Suggested by K.E. Krytov,
I.M.Puchkov, V.I.Karavaev] Rats. i izobr. predl. v stroi. no.6:
19-21 '58. (MIRA 11:10)

(Curbstones)

KRYTOV, K.Ye., PUCHKOV, I.M., KARAVAYEV, V.I.

Equipment for mechanized production of curbstones. Nov.tekh. i
pered. op. v stroi. 19 no.3:16-17 Mr '57. (MLRA 10:4)
(Curbstones) (Precast concrete)

Ростов, Л. М.
KRYTOV, K.Ye.; PUCHKOV, I.M.; KARAVAYEV, V.I.

Machinery for shaping concrete curb stones. Stroi. i dor. mashinostr.
no.2:27-28 F '57. (MIRA 10:3)

(Road machinery)

PUCHKOV, K.

Photo report: Mountain-climbing miners. Mast.ugl.2 no.11:23-24b N '53.
(MLRA 6:11)
(Mountaineering) (Coal miners)

GIBSHMAN, A.Ye., doktor tekhnicheskikh nauk, professor; PUCHKOV, K.F.,
kandidat tekhnicheskikh nauk.

Review of the Transactions of the All-Union Scientific Research
Institute of Railroad Construction and Planning no.12, 1954, on
problems of railroad planning. G.I.Chernomordik and others.
Reviewed by A.E.Gibshman, K.F.Puchkov. Transp. stroi. 5 no.9:31-32
N '55. (MIRA 9:2)

(Railroad engineering)

KOLOMEYETS, Aron Vol'fovich; PUCHKOV, Konstantin Fedorovich; CHERNYSHEV, V.I., redaktor; BOBROVA, Ye.N., tekhnicheskii redaktor

[Ways of reducing the cost of railroad construction] Puti snizheniia stoimosti zheleznodorozhnogo stroitel'stva. Moskva, Gos. transp. zhel-dor.izd-vo, 1957. 79 p. (MLRA 10:9)
(Railroads--Construction)

ПУЧКОВ, К.Ф., kand. tekhn. nauk, dots.

Estimated through and freight capacities of single-track railroad
lines. Trudy MTBI no. 6:83-88 '57. (MIRA 11:5)
(Railroads--Traffic)

PUCHKOV, K. V. Cand Tech Sci -- (diss) "Comparative study of the ^{buoyancy} of
fiber fabrics used in the ^{saving} making of life-preserving clothes." Mos, 1957. 12 pp 20 cm.
(Min of Higher Education USSR. Mos Technological Inst of Light Industry im L.M.
Kaganovich), 100 copies. (KL, 15-57, 106)

ROZIN, B.B., inzh.; PICHKOV, L.M., inzh.; PERVAKOV, V.P., inzh.

Using methods of linear programming in planning the charging of steel smelting furnaces. Stal' 23 no.9:845-847 S '63. (MIRA 16:10)

1. Zlatoustovskiy metallurgicheskiy zavod.

POKHONITS, V. P. & POKHON, L. V.

Vapor pressure over liquid alloys in the magnesium - calcium
system. Zhur. prikl. khim. 38 no. 5:1009-1014 My '65.
(NIRA 18511)

L. Leningradskiy tekhnologicheskii institut imeni Lomonosova.

SOV/78-4-2-35/40

5(2), 21(8)
AUTHORS:

Musakin, A. P., Puchkov, L. V.

TITLE:

The Synthesis of Tagged Iodate Without Carriers (Sintez mechenogo yodata bez nositelya)

PERIODICAL:

Zhurnal neorganicheskoy khimii, 1959, Vol 4, Nr 2, pp 483-485 (USSR)

ABSTRACT:

A method of producing active potassium iodate without carriers has been worked out by means of oxidation of potassium iodide with potassium permanganate and by electrolysis. The completeness of oxidation was controlled by means of paper-chromatography. The performance of the control is described in detail. In alkaline media iodide, iodate, and periodate can be separated by paper-chromatography. The oxidation of iodide with potassium permanganate practically quantitatively leads to iodate formation. The oxidation of iodide by electrolysis in an alkaline medium shows that only 50% iodine turn into potassium iodate, 30% into periodate, and 20% iodine remain unused iodide. The stability of the active iodate solution was investigated by paper-chromatography. It was found that the potassium iodate solution is stable. The conditions of the

Card 1/2

SOV/78-4-2-35/40

The Synthesis of Tagged Iodate Without Carriers

electrolysis were investigated by N. A. Kolobov.
There are 2 figures and 4 references, 2 of which are Soviet.

ASSOCIATION: Leningradskiy tekhnologicheskii institut im. Lensovet
(Leningrad Technological Institute imeni Lensovet)

SUBMITTED: August 16, 1957

Card 2/2

MASHOVETS, V.P.; PUCHKOV, L.V.

Vapor pressure above liquid magnesium and calcium. Zhur. prikl.
khim. 38 no.4:949-952 Ap '65. (MIRA 18:6)

1. Leningradskiy tekhnologicheskii institut imeni Lensoвета.

MUSAKIN, A.P., FUCHKOV, L.V., KOLOBOV, N.P.

"

Electrolysis of radioactive iodide. Trudy LTI no.58:36-39 '59.

1. Leningradskiy tekhnologicheskij institut im. Lensoveta.
(Iodine--Isotopes) (Electrolysis)

MUSAKIN, A.P.; PUCHKOV, L.V.

Synthesis of a tagged iodate without a carrier. Zhur.neorg.khim. 4 no.2:
483-485 F '59. (MIRA 12:3)

1. Leningradskiy tekhnologicheskij institut imeni Lensoвета.
(Iodates) (Iodine--Isotopes)

L 51848-65 EPA(s)-2/EWT(m)/EPF(c)/EPF(n)-2/EPF/EWP(t)/EWP(b) Pr-4/Ps-4/Pt-7/
Pu-4 IJP(c) JD/WW/JW/JG

ACCESSION NR: AP5011818

UR/0080/65/038/004/0949/0952

541.123+546.46+546.41

AUTHOR: Mashovets, V. P.; Puchkov, L. V.

TITLE: Vapor pressure over liquid magnesium and calcium

SOURCE: Zhurnal prikladnoy khimii, v. 38, no. 4, 1965, 949-952

TOPIC TAGS: pressure measurement, calcium, magnesium

ABSTRACT: The saturation method was used to measure the vapor pressure of magnesium and calcium. In order to increase the B/K ratio where B and K are the mass transfer coefficients for vaporization and diffusion respectively, the gas carrier (titanium-purified argon) was bubbled through a layer of the molten metal. The equipment is described. The vapor pressure of Mg (99.9%) measured at 970-1220°K is described by the equation

$$\log P = 7.905 - \frac{6916}{T} \text{ (mm Hg)}$$

The heat of vaporization λ_{vap} was found to be 31.6 kcal/mol = $1.32 \cdot 10^5$ kJ/mol. The

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ACCESSION NR: AP5011818

values obtained for P and λ_{vap} are in good agreement with those of other authors. The vapor pressure of Ca (99.3%) measured at 1160-1300°K is described by the equation

$$\log P = 8.28 - \frac{8750}{T} \quad (\text{mm Hg}).$$

The heat of vaporization λ_{vap} was found to be 40.0 kcal/mol = 1.68·10⁵ kJ/mol. The values obtained agree with those of B. Tomlin (Proc. Phys. Soc., B 67, 787, 1954), but the data of various authors are contradictory. Orig. art. has: 2 figures and 4 formulas.

ASSOCIATION: Leningradskiy tekhnologicheskii institut imeni Lensovet (Leningrad Technological Institute)

SUBMITTED: 30Jun64

ENCL: 00

SUB CODE: ME, MM

NO REF SOV: 003

OTHER: 011

Ti getter /6

Card 2/2

PUCHKOV, M., starshiy inzh.

Pravo-Yegorlyk system goes into operation. Sel'. stroi. 15
no. 2:8-10 F '61. (MIRA 14:5)

1. Glavvodkhoz Ministerstva sel'skogo khozyaystva RSFSR.
--(Stavropol Territory --Canals)

PUGHOT, H.M. 1946.

Unit for washing soap windows in industrial plants. Mashinostroyeniye
No. 171000. Issue 1955. (MIRA 18:6)

LEVTOV, M.R.; PUCHKOV, M.V.; PONOMAREV, A.N.; ROZENFEL'D, F.A.

Unit for local electric heating of viscous petroleum products in distribution reservoirs. Transp. i khran. nefti i nefteprod. no.11:26-27 '64.
(MIRA 18:1)

1. Leningradskiy filial Spetsial'nogo konstruktorskogo byuro "Transneft'-avtomatika".

PUCHKOV, M.V.; FEDOROVA, A.L.

Temperature coefficient of phagocytosis. J. Physiol., USSR, '52, 38,
490-495. (MLR 5:8)
(BA - A III Ja '53:12)

PUCHKOV, N

✓ 623. LUBRICANT PROPERTIES AFFECTING ENGINE STARTING. Puchkov, N. and Rubinshtein, B. (Avtom. Transp. (Auto. Transp., U.S.S.R.), 1955, (2), 17-19; abstr. in Ref. Zh. Khim. (Ref. J. Chem., Moscow), 1957, (11), 38761), a. Experiments with distillate and thickened oils in GAZ-52 and ZIS-120 engines showed that the starting properties of all lubricating oil depend on two factors:

the limit of pumpability and the limit of starting. The improvement of engine starting in winter must be effected in more than one way: by improving the flatness of the viscosity-temperature curve of the oil at low temperatures, and by changes in the design of the lubricating and starting systems of the engine.

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PUCHKOV, N.
PUCHKOV, N.

Experience in installing pneumatic transportation in double stand
mills. Muk.-elev. prom. 23 no.10:25 0 '57. (MIRA 11:1)

1. Krasnodarskiy kraymel'trest.
(Flour mills) (Pneumatic-tube transportation)

~~PUGHKOV~~, Nikita Aleksandrovich; NECHAYEV, I.A., redaktor; KOVALEVA, A.A.,
vedushchiy redaktor; KHLIBNIKOVA, L.A., tekhnicheskiiy redaktor

[My experience in drilling wells for water] Moi opyt bureniia
skvazhin na vodu. Moskva, Gos. nauchno-tekhn. izd-vo neft. i
gorno-toplivnoi lit-ry, 1957. 73 p. (MLRA 10:6)
(Wells) (Boring)

ПУСАНОВ, Н. А.

34032. Ratsionalizatsiya vodosnabzheniya v karakulevodcheskikh sovkhozakh.
Karakulevodstvo i zverovodstvo, 1949, No. 5, s. 31-32

SO: Knizhuaya, letopis', Vol. 7, 1949

PUCHKOV, N.G.

14
KYSKOV, M.V., GOLDSHTEYN, D.L., GUSENKOVA, YE.A., ALFINOVA, E.A.,
BOROVAIA, M.S., PUCHKOV, N.G., KAZANSKIY, V.L., BADIYSHTOVA, K.M.,
ROGACHEVA, I.M., CRESKOV, A.A., DENISENO, K.K., ALTSHULER, A.G.,
GERASIMENKO, N.M., YASTREBOVA, O.I., ZHADANOVSKIY, N.B.

Production of High-grade petroleum oils and waxes by hydrogenation.

Report to be submitted for the Sixth World Petroleum Congress,
Frankfurt, 16-26 June 63

PUCHKOV, N.G.

BLAGOVIDOV, I.F., KREYN, S.E., SEMENIDO, YE.G., PUCHKOV, N.G., ZASLAVSKIY, YU.S.

Investigation of motor oil performance and methods of evaluation

Report to be submitted for the Sixth World Petroleum Congress,
Frankfurt, 16-26 June 63

ENCLOSURE, 1. 1.

USSR/Chemistry - Viscosity Isobutenes, Poly-

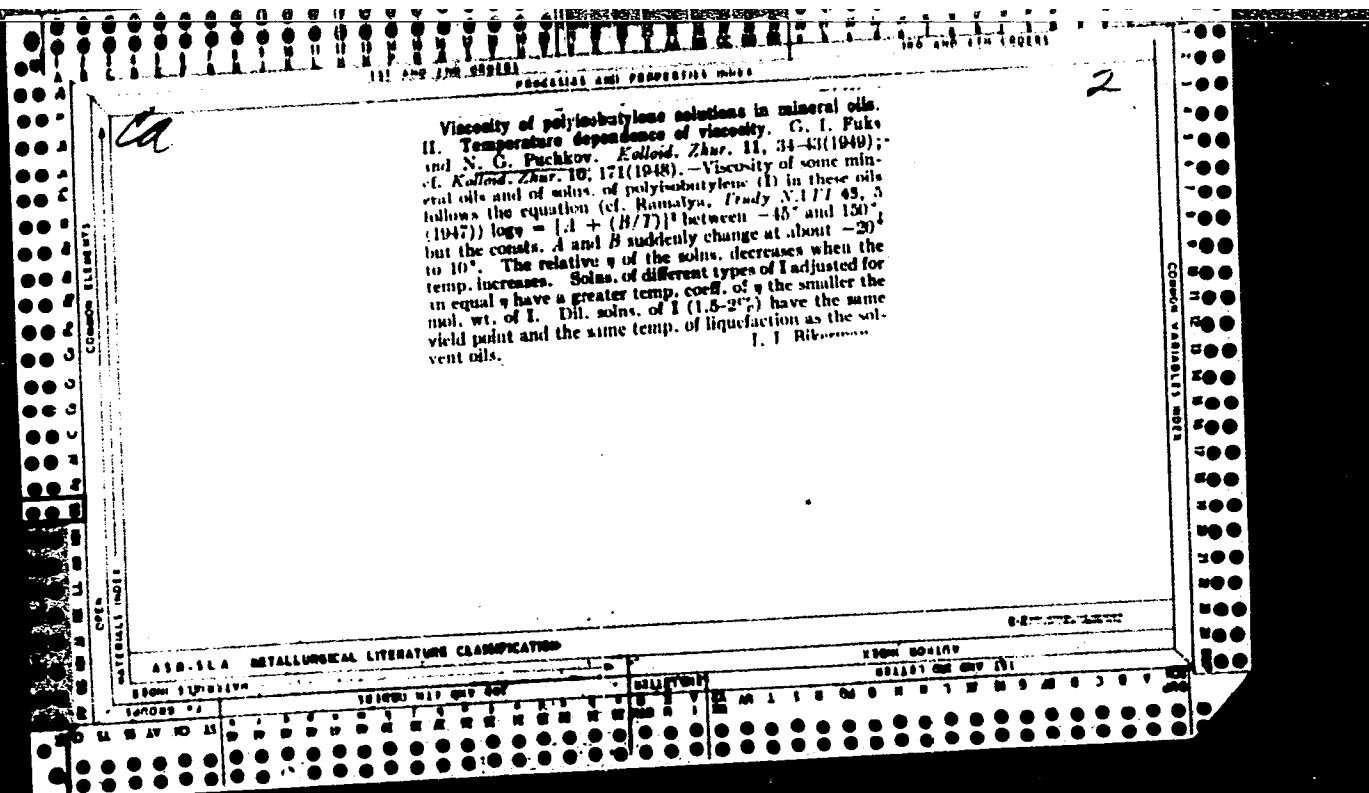
Sep/Oct 48

"Viscosity of Solutions of Polyisobutenes in Mineral Oils: I.. Dependence of the Viscosity on Concentration and Molecular Weight," G. I. Fuks, N. G. Fuchkov, Physicochem Lab, Tekhratsneft', 11 pp

"Kolloid Zhur" Vol X, No 5

Derived an equation which describes dependence of relative kinematic viscosity of solutions of polyisobutenes of molecular weights 4,000 - 30,000 in refined naphthalenic and paraffinic oils of average molecular weight 178 - 610 on the concentration. This equation is applicable to solutions of hexicolloids containing up to 8 - 10 g polymer per 100 ml, and to products with molecular weights of 10,000 - 30,000 if they contain 3 - 4 g/100 m. Submitted 8 Jul 47.

PA 2/50T70



CA

22

Low-temperature properties of oils which contain viscosity-improving addition agents. N. G. Puchkov, *Nefteyanos Khos.* 26, No. 3, 49-57(1948). Oils of 13-20% centistokes viscosity at 50°, thickened with polyisobutylene ranging from 6000 to 30,000 mol. wt. or with voltolized oils, were tested at temp. as low as -50° in regard to viscosity changes and loss of mobility. The higher the mol. wt. of the polyisobutylene, the flatter the viscosity-temp. curve for the same degree of thickening at 100°. An increase in concn. of the thickener is more effective than use of an equal concn. of thickener of higher mol. wt. Polyisobutylene concns. up to 2% have virtually no effect on the temp. at which the oil loses its mobility at a pressure differential of 25 cm. H₂O. The ultimate shear stress of the oil increases with higher concn. and higher mol. wt. of the thickener. With decrease in temp., the specific shear resistance of thickened oils rises at a more rapid rate than in plain oils. Polyisobutylenes in concns. up to 10% cause no structural-viscosity phenomena in the oils, but Voltol does so in 2% concn. The viscosity of thickened oils remained stable during storage over a period of one year.
Bruno C. Metzner

PUCHKOV, N.G., redaktor.

[Study and use of petroleum products (collection of works of the All-Union Bureau of Efficient Use of Petroleum Products) Vo' 2.] Issledovanie i primeneniye nefteproduktov (Sbornik rabot tekhnicheskoy i gornopromyshlennoy literatury). Pod red. N.G. Puchkova. Moskva, Gos. nauchno-tekhn. izd-vo nefti i gornopromyshlennoy lit-ry. Vyp. 2, 1950. 328 p.

(MLRA 6:8)
(Petroleum)

PUCHKOV, N. G. and BOROVAYA, M. S.

"Laboratory Research on the Engine Properties of Avtols from Paraffin Base Crudes", p 67, in the Monograph "Investigation and Use of Petroleum Products", edited by N. G. Puchkov, Gostoptekhizdat, Moscow-Leningrad, 1950.

PUCHKOV, N. G. and NITROFANOVA, I. A.

"Low Temperature Properties and Stability of Paraffinic Avtols", p 76,
in the Monograph "Investigation and Use of Petroleum Products", edited by
N. G. Puchkov Gostoptekhnizdat, Moscow-Leningrad, 1950.

PUCHKOV, N. G.

PUCHKOV, N.G.

[Diesel fuels] Dizel'nye topliva. Moskva, Gos. nauchno-tekhn. izd-vo
neftianoi i gorno-toplibnoi lit-ry, 1953. 193 p. (MLRA 7:5)
(Diesel fuels)

PUCHKOV, N. G.

AID - P-162

Subject : USSR/Engineering
Card : 1/1
Authors : Traktovenko, I. A. and Puchkov, N. G.
Title : Fuel for High Speed Diesel Engines
Periodical : Neft. khoz., v. 32, #1, 45-52, Ja 1954
Abstract : Analysis of the test results of six different fuels in six different engines is presented with 4 tables and 5 charts. The efficiencies, wear of moving parts, deposits on fuel nozzles and changes in the composition and properties of the lubricating oils with time and speed of operation are compared.
Institution : None
Submitted : No date

ПУЧКОВ, Н. Г.

ТРАКТОВЕНКО, И.А.; ПУЧКОВ, Н.Г.

Fuel for high-speed diesels. Neft.khoz. 32 no.1:45-52 Ja '54.
(MLRA 7:2)

(Diesel fuels)

PUCHKOV, N.G., redaktor; L'VOVA, L.A., redaktor; POLOSINA, A.S.,
~~tekhnicheskii~~ redaktor.

[Technical standards for petroleum products; a reference book]
Tekhnicheskie normy na nefteprodukty; spravochnaia kniga. Izd-
15-oe, perer. i dop. Moskva, Gos.nauchno-tekhn.izd-vo neftianoi
i gorno-toplivnoi lit-ry, 1955. 396 p. (MLRA 8:11)
(Petroleum products--Standards)

Puchkov, N. G.

Lasikov, B. V., Puchkov, N. G., and Englin, B. A.
Osnovy primeneniya nefteproduktov (Principal Uses of
Petroleum Products). Moscow: Gosudarst. Nauch.-Tech.
Izdatel'stvo Neftyanol i Gorno-Toplivnoi Lit. 1955. 481
pp.

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(2)

PACHKOV, N. G.

U S S R .

Engine performance of distillate motor oils. N. G. Puchkov, V. A. Dement'ev, and G. P. Belyanchikov. *Neftyanoe Khoz.* 33, No. 3, 68-74(1955). Residual oils were found to be superior lubricants as compared to distillate oils because they contain natural stabilizers which prevent the coagulation of impurities in the used oils and their settling upon the working parts of Diesel engines. These stabilizers consist of oxygenated and other surface-active compounds. Refining of distillate oils reduces their stability, but their lubricating quality is improved by additives.

W. M. Sternberg

AID P - 2720

Subject : USSR/Chemistry

Card 1/1 Pub. 78 - 17/27

Authors : Puchkov, N. G. and M. S. Borovaya

Title : ~~INFLUENCE OF ADDITION AGENTS ON THE PROPERTIES OF DIESEL LUBRICATING OILS~~
Influence of addition agents on the properties of Diesel lubricating oils

Periodical : Neft. khoz. v. 33, #6, 63-72, Je 1955

Abstract : An analysis is made of lubricating oils produced from crudes of different places. Their characteristics are tested with and without the addition of various agents. The results are given in tables. 4 references, 1935-1951.

Institution : None

Submitted : No date

Puchkov, N. G.

USSR/Engineering - Auto engines

Card 1/1 Pub. 128 - 10/31

Authors : Zaslavskiy, Yu. S., and Puchkov, N. G., Cand. Tech. Sc.

Title : About the advantages of the optimum engine running-in conditions

Periodical : Vest. mash. 35/5, 28-31, May 1955

Abstract : The optimum conditions for and the advantages of the test stand running-in of auto engines are debated. It was established that the application of less-viscous lubricants offers the possibility of reducing the engine running-in time on the test stand and an improvement in friction surfaces. A reduction in oil consumption of D-54 tractor engines subjected to running-in processes was observed. Tables; graph..

Institution :

Submitted :

PAPOK, Konstantin Karlovich, doktor tekhnicheskikh nauk; VIPPER, Andrey Borisovich, kandidat tekhnicheskikh nauk; RAMAYYA, K.S., doktor tekhnicheskikh nauk, retsenzent; PUCHKOV, N.G., kandidat tekhnicheskikh nauk, redaktor; UVAROVA, A.F., tekhnicheskii redaktor

[Carbon deposit, films and residues in automobile engines] Nagary, Iakovye otlozheniia i osadki v avtomobil'nykh dvigateliakh. Moskva, Gos. nauchno-tekhn. izd-vo mashinostroit. lit-ry, 1956. 153 p.
(Automobiles--Engines) (MLBA 10:3)

PUCHKOV, N. G.

PUCHKOV, N.G., redaktor; L'VOVA, L.A., vedushchiy redaktor; MUKHINA, E.A.,
tekhnicheskiiy redaktor

[Technical standards for petroleum products; a manual] Tekhnicheskie
normy na nefteprodukty; spravochnaia kniga. Izd. 16-oe, ispr. i dop.
Moskva, Gos.nauchno-tekhn.izd-vo nef. i gorno-toplivnoi lit-ry.
1957. 450 p. (MIRA 10:9)
(Petroleum products)

547

AUTHORS: Puchkov, N.G., Borovaya, M.S., Belyanchikov, G.P. and
Gavryukhin, N.M. (V.N.I.I. NP)

TITLE: Wearability of an additive in oil during its work in
an engine. (Srabatyvayemost' prisadki pri rabote
masla v dvigatele).

PERIODICAL: "Khimiya i Tekhnologiya Topliva i Masel" (Chemistry and
Technology of Fuels and Lubricants), 1957, No.2,
pp.49-56 (U.S.S.R.)

ABSTRACT: The problem of the required level of concentration of
additives in oils at which the wear of an engine
operating with high sulphur fuel will not exceed the
wear obtained with a low sulphur fuel and the limits of
the possibilities of additives in suppressing corrosion
wear were investigated. As a first step a method of
determining the rate of consumption of an additive in
oil was required. This was developed on the basis of
determining the content of barium chemically bound in
an additive and that split off from the additive and
combined with products formed on combustion of fuel and
oxidation of the oil (barium in octane and benzene
soluble and in the residue insoluble in these two
solvents). The efficiency of an additive at various
levels of sulphur in the fuel was studied using an
alkylphenol compound TsiATIM-339. It was shown that the
additive is being consumed during operation of an
engine (YAZ-204) and that the metallic component of the

Wearability of an additive in oil during its work in an engine. (Cont.) ⁵⁴⁷

additive is transformed into insoluble compounds which are partially filtered off with the products of the oxidation of the oil. The rate of consumption increases with increasing sulphur content of fuel. 5-10% additions of the above additive decrease the engine wear but the degree of wear obtained with low sulphur fuel cannot be attained. An increase in the concentration of the additive decreases corrosion wear but simultaneously increases the wear by abrasion. Maximum useful concentration of the additive for operation with fuels containing below 1% sulphur should not exceed 3% and for fuels containing up to 1.3% of sulphur - 5%. The wear of engine was measured by the method developed by IMASH A.N. SSSR and weighing of compression rings. Experimental results are given in graph and tables. 7 tables and 5 figures, no references.

Card 2/2

28-4-23/35

Puchkov, N.G.
AUTHORS: Puchkov, N.G., Candidate of Technical Sciences; Lozar', A.S., Engineer, and Traktovenko, I.A., Candidate of Technical Sciences; Brusyantsev, N.V., Candidate of Technical Sciences.

TITLE: On the Revision of Standards for Diesel Fuel. (K neresmotru standartov na dizel'noye toplivo). Comments on the Article by P.M. Golenev. (Otkliki na stat'yu P.M. Goleneva)

PERIODICAL: Standartizatsiya, 1957, # 4, pp 71 - 74 (USSR)

ABSTRACT: The three letters published under this title are responses to the article by P.M. Golenev in "Standartizatsiya" 1957, # 2. The first author agrees that revision is necessary and stresses its importance in connection with the needed increase in fuel production from the petroleum of the eastern USSR regions. He compares the Soviet fuel grades with USA specifications (ASTM) and stresses the necessity to consider American experience. He considers it unnecessary to establish separate fuel grades of the eastern petroleum which is sulfurous, as 1% sulfur in fuel does not overly intensify engine wear when preventive additives (like TsIATIM-399) are employed. Such fuels, he says, are being used without restrictions in other countries. He adds that products of both catalytic and thermal cracking should be permitted in diesel fuel. Long tests have proved the value of diesel fuel with 25-30% "cracked" kerosene. Methods

Card 1/3

28-4-23/35

On the Revision of Standards for Diesel Fuel. Comments on the Article by
P.M. Golenev

of determining the quantity of resins exist and should be utilized; this would eliminate the current specification of fuel by color, which has been repeatedly objected to by consumers. P.M. Golenev is right that the evaluation of the fractional composition of fuel must be simplified and the number of end-of-distillation points reduced. The new method of K.K. Papok and his laboratory staff must be applied if possible.

The two authors of the second letter agree with P.M. Golenev and give more recommendations on various points. The new techniques and the shift of tractors to diesel power have raised the demand for diesel fuel. This makes the use of the sulfurous fuel from the east regions, as well as the products of second processing necessary. The problem of sulfur is acute and remains unsolved, no reliable methods to eliminate it exist. Investigations by NAMI and VNII for Petroleum Processing (VNII neftepererabotki) have demonstrated that coking of fuel does not characterize the degree of carbon deposit formation in engine, and that the presence of "actual resins" is more characteristic in this respect.

Card 2/3

28-4-23/35

On the Revision of Standards for Diesel Fuel. Comments on the Article by
P.M. Golenev

The author of the third letter does not agree that kerosene-gas oil-fractions from catalytic cracking have proved useful as diesel fuel; the results of tests are as yet inconclusive and it is not yet determined what content of resinous and resin-forming compounds will impair the operation of diesel engine. The addition of 20-25% tractor kerosene into diesel fuel to lower its freezing point cannot be recommended (as is stated by Golenev). A 1% sulfur content in diesel fuel intensifies the wear on engine more than doubling that caused by a 0.2% content. The use of oils with TsIATIM-399 additive permits the utilization of fuel with a sulfur content of not over 0.6%, in the engine ЯА3 -204 and ЯА3 -206.

There are 2 tables and 1 figure.

ASSOCIATION: VNII neftepererabotki (VNII for Petroleum Refining), NAMI, VNII AT

AVAILABLE: Library of Congress

Card 3/3

PUCHKOV, N.G.; SEROV, A.V.; BELYANCHIKOV, G.P.; REZNIKOV, V.D.; PYSHKOV, S.I.

Suitability for engines of diesel oils derived from sulfur crude oil.
Trudy VNII NP No.6:3-12 '57. (MIRA 10:10)
(Diesel fuels)

PUCHKOV, N.G.; BELYANCHIKOV, G.P.

Fuels for high-speed diesel engines. Trudy VNII BP no.6:13-23 '57.
(MIRA 10:10)

(Diesel fuels)

PUCHKOV, N.G.; RUBINSHEYN, S.F.

Using the ZIL-120 diesel engine for studying starting qualities of
oils. Trudy VNII NP no.6:24-32 '57. (MIRA 10:10)
(Diesel fuels)

Puchkov, N.G.

65-12-2/9

AUTHORS: Kreyn, S.E., Mitrofanov, M.G. and Puchkov, N.G.

TITLE: On the Choice of Oils of an Optimum Chemical Composition and Methods of Their Production (O podbore masel optim-al'nogo khimicheskogo sostava i putyakh ikh proizvodstva)

PERIODICAL: Khimiya i Tekhnologiya Topliva i Masel, 1957, No.12, pp. 13-22 (USSR).

ABSTRACT: The importance of group-chemical composition of lubricating oils and not only their physico-chemical constants, for the evaluation of their performance characteristics is discussed and illustrated by some examples. On the basis of the data cited it is concluded that the production of oils of better performance characteristics is possible with the existing production methods. It is pointed out that at present the production of oils of low performance is caused by an incorrect approach to the evaluation of oil quality. On choosing oils, their quality is evaluated on the basis of their physico-chemical indices and not their chemical composition and results of tests on corresponding mechanisms in spite of the fact that the former do not determine the behaviour of oils under operating conditions. The most rational scheme for the investigation of lubricating oils and the choice of their optimum composition can be as follows: 1) an investigation of group-chemical

Card1/2

65-12-2/9

On the Choice of Oils of an Optimum Chemical Composition and Methods
' of Their Production.

composition of the raw material and the determination of the available naphthene-paraffinic and aromatic components; 2) an investigation of physico-chemical and operating properties of the individual structural-group fraction of hydrocarbons in the pure state and mixed in various proportions under laboratory conditions and on modelling equipment of the ПЗБ type and similar; 3) on the basis of the results obtained, the choice of optimum compositions of the above fractions with and without additives should be made; 4) testing of the chosen composition of oils with and without additives on single-cylinder engines and the introduction of the necessary correction in the composition, and 5) the production under industrial conditions of experimental lots of oils of the chosen composition and their testing on single-cylinder and full-scale engines. There are 1 figure, 10 tables and 8 Slavic references.

AVAILABLE: Library of Congress

Card 2/2

L 9102-65 EWT(m)/EPF(c)/T/ENP(b) Pr-4 ASD(m)-3/AFETR/ASD(p)-3/SSD/
AFTC(p) JD/WB/DJ

ACCESSION NR: AT3001319

S/2933/63/005/000/0231/0235

AUTHOR: Ramayya, K. S.; R. Kh. Sil's; M. S. Borovaya; N. G. Puchkov B

TITLE: A method for determining the corrosiveness of oils from sulfur-containing crude oils and the anticorrosive effect of additives

SOURCE: AN SSSR. Bashkirskiy filial. Khimiya seraorganicheskikh soyedineniy, sodержashchikh v neft'yakh i nefteproduktakh, v. 5, 1963, 231-235.

TOPIC TAGS: lubricating oil, crude oil, sulfurous crude, corrosion, oil additive, corrosion prevention, alkylphenol, alkylsalicylate, copper stearate, copper naphthenate, hydrotreating

ABSTRACT: Investigations by the standard methods give excessively low values for oil corrosiveness, and the testing conditions are too mild for the differential evaluation of the anticorrosive effectiveness of currently used additives. The corrosiveness of motor oils obtained from sulfur-containing crudes was therefore investigated using experimental conditions which were chosen in consideration of the fact that in an engine, the processes of oxidation are catalyzed by the metal surface of the machine parts as well as by the abrasion products, various highly dispersed metal particles suspended in the oil, and by organic metal salts dissolved or dispersed in the oil. Thus, in order to catalyze the

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L 9102-65

ACCESSION NR: AT3001319

2

oxidative reactions during the 25-hour experiment, copper stearate or naphthenate were added in the amount of 0.02% by weight. The results of tests with and without a catalyst at 140C on five selectively refined oil samples and five hydrorefined oil samples obtained from sulfur-containing crude oils showed that the corrosion of lead in oils from sulfurous crudes was increased considerably under the influence of a catalyst. A study of additives under similarly extreme experimental conditions showed that motor oils with almost no corrosiveness can be obtained by the combination of alkylphenol additives with alkylsalicylates (up to 10% and higher) or by additives consisting of cleansing and inhibiting components. The effect of barium and calcium sulfonates on lead corrosion in different oils is plotted against time for different additive concentrations, and the advantages of sulfonate additives over others with respect to their stabilizing and anticorrosive effects are shown. The corrosion factor obtained by the method proposed in this paper indirectly evaluates the oxidizability of the oil: it can therefore be recommended under technical

conditions for oils designed for contemporary internal combustion engines
has: 3 figures and 2 tables.

Card

L 9102-65
ACCESSION NR: AT3001319

ASSOCIATION: Tsentral'ny'y nauchno-issledovatel'skiy avtomobil'ny'y i avtomotorny'y
institut (Central Scientific Research Institute for Automobiles and Automotive Engines);
institut (Central Scientific Research Institute for Automobiles and Automotive Engines);
institut (Central Scientific Research Institute for Automobiles and Automotive Engines);

18KUSSTVENMOG
Petroleum and Gas and for the Preparation of Synthetic Liquid

SUB CODE: FP

SUBMITTED: 00

ENCL: 00

NO REF SOV: 006

OTHER: 000

3/3

Card

PUCHKOV, N.G.; REZNIKOV, V.D.

Concentration of additives in diesel oils. Khim. i tekhn. topl .
i masel 9 no.5:57-61 5 My'64 (MIRA 17:7)

. Vsesoyuznyy nauchno-issledovatel'skiy institut po perera-
botke nefii i gaza i polucheniyu iskusstvennogo zhidkogo top-
liva.

ACCESSION NR: AP4036981

S/0065/64/000/005/0057/0061

AUTHORS: Puchkov, N. G.; Reznikov, V. D.

TITLE: The concentration of additives in diesel oils

SOURCE: Khimiya i tekhnologiya topliv i masel, no. 5, 1964, 57-61

TOPIC TAGS: diesel engine, lubrication, diesel oil, diesel fuel, corrosion wear additive, VNII NP-360 additive, sulfur containing fuel, deposit formation, additive concentration, oil change period

ABSTRACT: The use of additives appears to be the most effective and economically expedient means of preventing corrosive wear and contamination of engines in high speed diesels using sulfur-containing diesel fuels; thus, an examination was made into the selection of the proper concentration of lubrication oil additives for such fuels. Tests were made with up to 15% VNII NP-360 additive in OS-11 oil. The results indicated that the harmful action of fuels containing 0.2—1.5% S can be suppressed by using a sufficient concentration of the additive. The additive used depends primarily on the amount of sulfur in the fuel, and the amount of additive required to suppress

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ACCESSION NR: AP4036981

engine wear is higher than the amount required to suppress the effect of sulfur on the formation of deposits in the engine. A formula which incorporates factors to describe the amount of sulfur and of additive was developed to determine the time for oil change in engines. The use of a high concentration of additives would be wasteful if low-sulfur fuels were used, and oils with low additive concentrations would require too frequent changes if high-sulfur fuels were used. For lubricating high-speed compressionless diesel engines operated on fuels containing 0.2—1.0% sulfur, the authors recommend the use of two groups of oils (differing by a factor of 2—3 with respect to additive concentration). Orig. art. has: 2 formulas and 5 figures.

ASSOCIATION: VNII NP

SUBMITTED: 00

ATD PRESS: 3078

ENCL: 00

SUB CODE: FP

NR REF SOV: 009

OTHER: 005

Card 2/2

BLAGOVIDOV, I.F.; DERYABIN, A.A.; PUCHKOV, N.G.

Classification of lubricating oils for internal combustion engines.
Khim.i tekhn.topl.i masel 8 no.2:37-43 F '63. (MIRA 16:10)

1. Vsesoyuznyy nauchno-issledovatel'skiy institut po pererabotke
nefti i gazov i polucheniye iskusstvennogo zhidkogo topliva.

PAPOK, K.K.; PUCHKOV, N.G.; RAMAYYA, K.S.

Complex laboratory methods of testing oils based on various
property indices. Khim. i tekhn. topl. i masel 8 no.10:53-58
0 '63. (MIRA 16:11)

L 20341-63 EPF(c)/EWI(m)/9DS AFFTC/APGC Pr-4 GW/VW/DJ
ACCESSION NR: AT3002006 S/2664/61/000/000/0311/0318

AUTHORS: Puchkov, N.G.; Borovaya, M.S.; Deryabin, A.A.; Belyanchikov, G.P.

TITLE: The testing of oils with additives on engines and mechanisms, and practical experience therewith. The testing of oils from sulfurous crudes with various additives.

SOURCE: Prisadki k maslam i toplivam; trudy nauchno-tekhnicheskogo soveshchaniya. Moscow, Gostoptekhizdat, 1961, 311-318.

TOPIC TAGS: lubricant, lubrication, additive, oil, engine, mechanism, sulfurous, S-containing, S, crude, premium, Series 0, Series I, Series II, Series III, AS-9, 5, DS-8, DS-11, VNII NP-360, TsLATIM-339, VNII NP-362, PMS_{ya}, Anglomol, Monsanto, Santalube, DK-2, Esso, Castrol, Shell, Rimula, Mobilguard, YaAZ-204, GAZ-51, D-35, 2D100, oxidation, antioxidation, ash content, PZV, Kolomenskoye.

ABSTRACT: The paper sets forth the generalization of results of tests of a number of domestic additives in comparison with some foreign additives, in an attempt to obtain oils of Series I, II, and III by means of such additives. Tests comprised Esso 20W/30 and AS-9, 5 with various additives in the premium grade (Series 0); Castrol-30, Shell X-100, and DS-11 with various additives in Series I; Rimula-30,

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I. 20341-63

ACCESSION NR: AT3002006

SAE 30 (Shell), and DS-11 with additives in Series II; and Mobilguard-593 and DS-11 with Santalube-311 additive in Series III. Ash content, PZV merit factor, oxidation in the DK-2 testing device (residue in %, change in viscosity in cst at 100°C, and high-temperature stability in min) are tabulated. Detailed data for engine tests in the GAZ-51, D-35, and YaAZ-204 engines, as well as 600-hr long-term tests in the GAZ-51 are tabulated. Details on the operational qualities of DS-8 and DS-11 with various additives are adduced. These laboratory investigations and engine tests of oils with additives show that existing domestic additives permit the obtainment of engine oils of a new grading system corresponding to foreign oils of premium and Series I type for stringent engine-operating conditions. These oils are also suitable for use in older engines. Additives for oils of Series II and III, required for newly projected engines, must still be developed. Some domestic additives, suitable for making of oils of Series 0 and I, approach the quality of foreign additives. However, additional work is required to establish optimal selection and concentration criteria for these additives. Additional work is required to improve additives for oils of Series I for engines such as the Kolomen-skoye-Plant Diesel engines, the SPGC, and others. Additional work to reduce the content or change the character of metal-organic compounds in additives is required to reduce the precipitates in the combustion chamber which increase the wear; the antioxidation properties of additives must also be improved.

Card 2/3

L 20341-63

ACCESSION NR: AT3002006

Orig. art. has 7 tables.

ASSOCIATION: VNII NP

SUBMITTED: 00

DATE ACQ: 23Jan63.

ENCL: 00

SUB CODE: FL, CH, EL

NO REF SOV: 007

OTHER: 000

Card 3/3

BLAGOVIDOV, I.F.; BOROVAYA, M.S.; DRUZHININA, A.V.; DERYABIN, A.A.;
ZASLAVSKIY, Yu.S.; MONASTYRSKIY, V.M.; PUCHKOV, N.G.;
FILIPPOV, V.F.

Selecting additives to oils for various uses. Khim. i tekhn.
topl. i masel. 8 no.3:54-62 Mr '63. (MIRA 16:4)

1. Vsesoyuznyy nauchno-issledovatel'skiy institut po pererabotke
nefti i gazov i polucheniyu iskusstvennogo zhidkogo topliva.

(Lubrication and lubricants—Additives)

PUCHKOV, N.G.; TRAKTOVENKO, I.A.; BELYANCHIKOV, G.P.; GAVRYUKHIN,
V.M.; SAN'KO, Z.A.

Performance characteristics of winter diesel oil from eastern
sulfur-bearing crudes. Khim.i tekhn.topl.i masel 8 no.1:58-63
Ja '63. (MIRA 16:2)

1. Vsesoyuznyy nauchno-issledovatel'skiy institut po pererabotke
nefti i gazov i polucheniyu iskusstvennogo zhidkogo topliva.
(Diesel fuels)

AUTHOR: Puchkov, N. G. and Gavryushin, V. M.

S/262/62/000/002/014/017

I008/I208

TITLE: On method of combatting corrosive wear of engines using diesel fuels having a high sulphur content

PERIODICAL: Referativnyy zhurnal, otdel'nyy vypusk. 42. Silovyye ustanovki, no. 2, 1962, 64, abstract 42.2.386. In collection "Khimiya seraorgan. soyedineniy, soderzhashchikhsya neftyakh i nefteproduktakh". M. AN SSSR, 1959, 293-303

TEXT: The mechanism of corrosion is discussed. Different opinions concerning the mechanism of the action of inhibitors added to the fuel and to the lubricant are given. An investigation made with inhibitor LI-339 (Ts-339) showed a dependence of the abrasive and corrosive wear on the concentration of the inhibitor. A research program on the properties of new local and imported inhibitors which are added to the lubricants ИП-22, (IP22), ДФ-1 (DF-1) and Ts-353 (manufactured by Anglomol, Monsanto and others) was started. A short description of imported inhibitors added to fuels is given. As a result of the use of zinc naphthenate (.3% of inhibitor added to diesel fuel containing 1% of sulphur) the increased corrosive wear of the bushing was completely overcome and the wear of the rings was decreased; however, clinker formation in the combustion chamber and encrustation of the valves and of the injector nozzle was increased. The presence of inhibitors in the fuel slows down their dissolution in the lubricant. Possibilities of amine-type inhibitors free from metals or containing a small amount of them are pointed out. There are 9 figures and 7 references.

[Abstracter's note: Complete translation.]

Card 1/1

S/262/62/000/010/015/024
1007/1207

AUTHOR. Rezinkov, V. D., Puchkov, N. G. and Borovaya, M. S.
TITLE: Calculation of proper concentration of neutralizing additives to motor lube-oils
PERIODICAL: Referativnyy zhurnal, otdel'nyy vypusk. 42. Silovyye ustanovki, no. 10, 1962, 68, abstract 42.10.384. In collection "Prisadki k maslam i toplivam". M., Gostoptekhizdat, 1961, 297-304

TEXT: The influence is studied of the degree of concentration of цитим 339 (tsiatim 339) and вни нп-360 (vnii np-360) additives on coke formation and wear in a four-stroke diesel engine. A method has been devised for determining the proper concentration of neutralizing additives. For the second type of additives to fuels with a varying sulfur-content, used in a Д-38 (D-38) diesel, the predicted values (of concentrations) show good agreement with the experimental data. There are 4 figures and 7 references.

[Abstracter's note: Complete translation.]

✓
1

Card 1/1

S/081/62/000/005/093/112
B160/B138

AUTHORS: Reznikov, V. D., Puchkov, N. G., Borovaya, M. S.

TITLE: Calculating the necessary concentrations of neutralizing additives for heavy diesel engine oils

PERIODICAL: Referativnyy zhurnal. Khimiya, no. 5, 1962, 533, abstract 5M255 (Sb. "Prisadki k maslam i toplivam", M., Gostoptekhnizdat, 1961, 297 - 304)

TEXT: A method has been developed for making preliminary calculations of the concentrations of neutralizing additives required for oils, based on the sulfur content of the fuel used and various design and operating parameters of the engine. A result of the work was the discovery of the nature of the dependence of wear and carbonization in a four-stroke diesel on the concentration of VNIINP-360 (VNIINP-360) additive in the oil. The calculated quantities of VNIINP-360 additive required for D-38 (D-38) diesel operating on fuels with varying sulfur contents agree closely with the results obtained experimentally. It is pointed out that correct selection of oil additive concentration is particularly important when fuels with a high sulfur content are used. [Abstracter's note: Complete trans-
Card 1/2

Calculating the necessary...
lation.]

S/081/62/000/005/093/112
B160/B138

Card 2/2

257

S/081/62/000/006/095/117
B162/B101

11.9700
AUTHORS:

Puchkov, N. G., Borovaya, M. S., Deryabin, A. A.,
Belyanchikov, G. P.

TITLE:

Tests on oils from sulfur petroleums with various additives

PERIODICAL:

Referativnyy zhurnal. Khimiya, no. 6, 1962, 546, abstract
6M293 (Sb. "Prisadki k maslam i toplivam". M.,
Gostoptekhnizdat, 1961, 311-318)

TEXT: Laboratory evaluation and results of motor tests of a series of
imported oils (with additives) of the "premium" grade, I, II, and III and
Soviet oils AC-6 (AS-6), AC-9.5 (AS-9.5), AC-11 (DS-11), and AC-8 (DS-8)
from sulfur petroleum with the additives ВНИИ НП-360 (Vnii NP-360),
ИП-22 (IP-22), ПМСЯ (PMSya), СБ-3 (SB-3), НГ-102 (NG-102), Vnii NP-362,
PMSya + Vnii NP-353, Vnii NP-370, Vnii NP-371, Циатим-339 (Tsiatim-339),
and some others. The motor tests were carried out in test-bed and operating
conditions on the engines ГАЗ-51 (GAZ-51), А-35 (D-35), ЯАЗ-204 (YaAZ-
204), 2А-100 (2D-100), СМД (SMD), and КАМ-46 (KDM-46). The tests showed
that Soviet oils with the additive Vnii NP-360 (8%) or the additive IP-22

Card 1/2

Tests on oils from sulfur ...

S/081/62/000/006/095/117
B162/B101

satisfy the requirements for oils of grade I. Soviet oils with the additives Tsiatim-339, Vnii NP-370, or Vnii NP-371 in a concentration of 3-3.5% proved to be equivalent to the imported oil ESSO-20 W/30 of "premium" grade. [Abstracter's note: Complete translation.]

Card 2/2

11.9100 1583

32531
S/065/62/000/001/002/002
E194/E135

AUTHORS:

Puchkov, N.G., Borovaya, M.S., Belyanchikov, G.P.,
Zelenskaya, R.G., and Severov, Ye.G.

TITLE:

Service performance of basic lubricants refined in
different ways

PERIODICAL:

Khimiya i tekhnologiya topliv i masel, no.1, 1962,
53-59

TEXT:

Engine tests at the VNII NP showed that engine oils derived from Eastern high sulphur crudes caused ring-sticking. In this respect alone they were worse than Baku oils, being equal or better in all other respects. Accordingly, a study was made of hydrocarbon group and ring structure and other properties of various lubricants before and after engine testing. Eastern and Baku oils were found to be generally very similar but differ in the content of sulphur compound and in hydrocarbon structure. Because of their constitution Eastern oils oxidise to form oxyacids and asphaltene which promote ring sticking. Even though the oil-resin contents of the initial base oils were

Card 1/3

32531

Service performance of basic ...

S/065/62/000/001/002/002
E194/E135

similar, the oils from Eastern crudes produced more lacquer in the engine and in a laboratory oxidation test than did Baku oils. Oils deeply refined by solvent, acid or adsorbents were more stable, but whereas the Baku oils so refined deteriorated at a steady rate the Eastern oils displayed an induction period, being initially the more stable, but later oxidising more rapidly. Adsorption refining was particularly effective in improving the stability of the oils and reducing ring sticking with oils of Eastern crudes, giving satisfactory performance even without the use of additives. Work is in progress on hydrofined Eastern oils and preliminary indications are that this treatment gives somewhat higher VI than solvent treatment. However, hydrofined Eastern oils have inferior additive susceptibility, particularly to sulphonates, though their properties were much improved by additive ВМММ ВП-360 (VNII NP-360). Hydrofined oils with this additive behaved well in 100 and 600 hour gasoline engine tests and in 800 hour diesel engine tests. A simple comparison of certain physical properties of hydrofined Eastern oil with those of Essolube, and Shell Rimula oils, indicates that the Soviet

Card 2/3

X

Service performance of basic ... ³²⁵³¹
S/065/62/000/001/002/002
E194/E135

base oils can be as good as foreign ones. The need to match
additive to base oil is emphasised.
There are 5 figures, 9 tables and 4 Soviet-bloc references.

ASSOCIATION: VNII NP

Card 3/3

✓

29445

S/081/61/000/017/145/166

B117/B138

11.9000

AUTHORS: Puchkov, N. G., Borovaya, M. S., Reznikov, V. D.

TITLE: Change in chemical composition and operating properties of oils during service in the engine

PERIODICAL: Referativnyy zhurnal. Khimiya, no. 17, 1961, 472; abstract 17M219 (Tr. 3-y Vses. konferentsii po treniyu i iznosu v mashinakh. M., AN SSSR, v. 3, 1960, 373 - 381)

TEXT: The authors tested heavy diesel lubricating oils from Baku and from Eastern sulfurous petroleums with and without addition of 3% ЦИАТИМ-339 (Tsiatim-339) on engines of the types ГАЗ-51 (GAZ-51) and Д-35 (D-35). The chromatographically determined, chemical group composition is given for oils in the initial state and after 50, 100, and 200 hr service in the engine. The monocyclic hydrocarbon concentration was found to decrease, and that of the polycyclic hydrocarbons and tarry matter increased. When the D-35 engine was run on a sulfur-base diesel fuel (1 - 2% S) the oil aged much faster and insoluble substances formed to a considerably higher extent than during operation with a fuel containing 0.2% S. [Abstracter's note: Complete translation.]
Card 1/1

PUCHKOV, N.G.; BOROVAYA, M.S.; BELYANCHIKOV, G.P.; ZELENSKAYA, R.G.;
SEVEROV, Ye.G.

Performance characteristics of base oils obtained by various refining
processes. Khim. i tekhn. topliv masel 7 no.1:53-59 Ja '62.
(MIRA 15:1)

1. Vsesoyuznyy nauchno-issledovatel'skiy institut po pererabotke
nefti i gaza i polucheniyu iskusstvennogo zhidkogo topliva.
(Lubrication and lubricants)

PUCHKOV, N. G.

SOV/5055

PHASE I BOOK EXPLOITATION

Vsesoyuznaya konferentsiya po treniyu i iznosu v mashinakh. 3d, 1958.

Gidrodinamicheskaya teoriya amarki. Opory skol'zheniya. Smazka i smazochnyye materialy (Hydrodynamic Theory of Lubrication, Slip Bearings, Lubrication and Lubricant Materials) Moscow, Vostochny AN SSSR, 422 p. Errata slip inserted. 3,500 copies printed. (Series: Its: Trudy, v. 3)

Sponsoring Agency: Akademiya nauk SSSR. Institut mashinovedeniya. Resp. Eds. for the Section "Hydrodynamic Theory of Lubrication and Slip Bearings": Ye. M. Gut'yar, Professor, Doctor of Technical Sciences, and A. K. D'yachkov, Professor, Doctor of Technical Sciences, and A. G. for the Section, "Lubrication and Lubricant Materials": G. V. Vinogradov, Professor, Doctor of Chemical Sciences; Ed. of Publishing House: N. Ya. Klebanov; Tech. Ed.: G. N. Ous'kova.

FURPOSE: This collection of articles is intended for practicing engineers and research scientists.

COVERAGE: The collection, published by the Institut mashinovedeniya AN SSSR (Institute of Science of Machine Building of the Academy of Sciences USSR) contains papers presented at the III Vsesoyuznaya konferentsiya po treniyu i iznosu v mashinakh (Third All-Union Conference on Friction and Wear in Machines) which was held April 9-15, 1958. Problems discussed were in the field of hydrodynamic theory of lubrication and wear.

Hydrodynamic Theory (Cont.)	365
Kuliyev, A. M. Results of the Work of the Aznil NP (Azerbaydzhan Scientific Research Institute of the Petroleum Industry) in the Field of Synthesis, Investigation, and Application of Additives to Lubricating Oils	366
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Puka, G. I., M. Ye. Gal'tsova, P. Ya. Kiryushov, A. S. Mikhaylyuk, and I. I. Uss. On the Applicability of Synthetic Esters as Lubricant Materials	386
Fuks, G. I., and M. I. Kaverina. Lubricating Capacity and Properties of the Boundary Layers of Oils (Physical Significance and Characteristics of the Lubricating Capacity of Oils)	397
Klinov, K. I., and P. P. Zarudniy. Mechanical Destruction of Solutions of Polymers in a Flow (Published in 1959 under the title: "Mechanical Destruction of Solutions of Polyisobutylene in Mineral Oils") (Khimiya i tekhnologiya topliv i masel, No. 2, 1959)	408
Pavlov, V. P. Elastic-Endurance Properties of Lubricant Materials (Izv. AN SSSR, OTN, "Mekhanika i mashinostroyeniye, No. 2, 1959)	408
Pirmanova, Ye. N., and S. G. Arabyan. Development of an Accelerated Engine Method for Testing Oils for Diesel Tractors ("Traktory i sel'khoz mashiny, No. 9, 1958)	408

END

PUCHKOV, N.G.; BOROVAYA, M.S.; ZELENSKAYA, R.G.; BELYANCHIKOVA, G.P.

Performance of winter motor oils from eastern sulfur-bearing
crudes. Khim.i tekhn.topl.i masel 4 no.2:10-18 F '59.
(MIRA 12:2)

1. Vsesoyuznyy nauchno-issledovatel'skiy institut po pererabotke
nefti i gaza i polucheniya iskusstvennogo topliva.
(Lubrication and lubricants--Testing)

PAPOK, K.K.; RAGOZIN, N.A.; PUGHKOV, M.G., redaktor; L'VOVA, L.A., vedushchiy redaktor; POLOSINA, A.S., tekhnicheskiiy redaktor.

[Technical dictionary of fuel and lubricants] Tekhnicheskii slovar' po toplivu i maslam. Izd. 2-e, dop. i ispr. Moskva, Gos. nauchno-tekhn. izd-vo neftianoi i gorno-toplivnoi lit-ry, 1955. 386 p.

[Microfilm]

(MIRA 8:1)

(Fuel--Dictionaries) (Lubrication and lubricants--Dictionaries)

Puchkov, N G.

11(4), 15(5)

PHASE I BOOK EXPLOITATION

SOV/1777

Losikov, Boris Vital'yevich, Nikolay Gavrilovich Puchkov, and Boris Abramovich Englin

Osnovy primeneniya nefteproduktov (Main Aspects of Petroleum Product Utilization) 2d ed., rev. and enl. Moscow, Gostoptekhnizdat, 1959. 566 p. 6,500 copies printed.

Exec. Ed.: L.A. L'vova; Tech. Ed.: I.G. Fedotova

PURPOSE: This book is intended for engineers and technicians of the petroleum industry and other branches of industry connected with the production of petroleum products and their utilization.

COVERAGE: In the opinion of the authors, the increasingly growing demand for upgraded fuels and lubricants to operate machines and engines of the most modern systems and designs has made necessary the development of a new branch of science dealing with the use of such petroleum products as fuel, lubricating oil, and grease. In the first part of this work, which is a revision

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of the first edition, the authors discuss the various kinds of fuels used to run internal combustion engines with spark plug ignition, diesel engines, and jet engines. The chemical composition of these fuels, their properties, stability, ignition, combustion and behavior during various phases of operation are analyzed. Considerable attention has been given both to the additives which improve antiknock properties of gasoline as well as to the admixture of ethyl fluids. The problem of reducing carbon deposition, scaling and gumming, as well as of the corrosion of various engine parts and mechanisms are also discussed at length. The second part of this work is devoted to the use of lubricants, their properties, viscosity, oxidation resistance, etc. The authors discuss problems connected with the lubrication of internal combustion engines, transmission systems, jet engines, turbojet engines, turboprop engines and compressors of different types. Additives which improve the lubricating properties of oils, their oxidation resistance, and wear resistance are also discussed. Chapters I, II, and IV of Part I were written by Candidate of Technical Sciences, B.A. Englin; Chapters III and V of Part I and a section of Chapter III of Part II were written by

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N.G. Puchkov. Part II was written by Doctor of Technical Sciences, Professor B.V. Losikov, with the exception of the section Lubrication of Instruments which was written by Candidate of Chemical Sciences G.I. Fuks, and the section Viscosity of Lube Oil Additives which was written by Candidates of Technical Sciences, N.I. Kaverina and N.S. Puchkov. The text contains numerous graphs and tables as well as a number of bibliographic references listed separately for each chapter. There are 573 references of which 380 are Soviet.

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PUCHKOV, N.G.; BOROVAYA, M.S.; ZELENSKAYA, R.G.

Operating properties of automobile motor oils from eastern sulfur-
bearing crudes. Khim. i tekhn. topl. i masel. 3 no.8:1-9 Ag '58.
(MIRA 11:9)

(Lubrication and lubricants)

PUCHKOV, N. G.

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Vsesoyuznyy nauchno-issledovatel'skiy institut po pererabotke nefti i gaza i polucheniya iskusstvennogo zhidkogo topliva

Issledovaniye i primeneniye nefteproduktov (Study and Use of Petroleum Products) Moscow, Gostoptekhizdat, 1957. 213 p. (Series: Its: Trudy vyp. 6) 1,000 copies printed.

Eds.: Puchkov, N.G., Zaslavskiy, Yu. S.; Executive Ed.: Kleymenova, K.F., Engineer; Tech. Ed.: Mukhina, E.L.

PURPOSE: This book is intended for engineering and scientific personnel concerned with the production, study and use of petroleum products.

COVERAGE: This collection of articles gives the results of the scientific research work of the Vsesoyuznyy nauchno-issledovatel'skiy institut po pererabotke nefti i gaza i polucheniya iskusstvennogo Zhidkogo topliva (All-Union Scientific Research Institute for the Processing of Petroleum and Gas for the Production of Synthetic Liquid Fuel) on the operational properties
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of fuels and lubricating oils and describes methods for investigating, by the use of radioactive isotopes, the chemical composition and physicochemical properties of petroleum products and the wear-resistant properties of oils.

TABLE OF CONTENTS:

I. TESTING FUELS AND LUBRICATING OILS

Puchkov, N.G.; Serov, A.V.; Belyanchikov, G.P.; Reznikov, V.D.;
and Pychkov, S.I. Motor Properties of Diesel Oils from
Sulfurous Petroleum 3

Diesel oil from eastern Devonian petroleum deposits with high sulfur content (up to 1 percent or more) was evaluated on the basis of the following criteria: 1) motor properties, 2) power and economy factors (in motor D-35), 3) wear of motor parts (the main criterion), and 4) functional stability. Laboratory investigations and extended tests of this oil, with additives "aznii-4" and "tsiatim-339", showed that it guarantees normal length of service for tractor and automobile diesels (D-35 and YaAZ-204 respectively), and is equal in quality to
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oil from Baku deposits. There are 8 tables and 1 Soviet reference.

Puchkov, N.G., and Belyanchikov, G.P. Fuel for High-speed Diesels

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The present article gives comparative test data on standard fuel (according to GOST 4749-49 DL), fuel from the heavier fractions of petroleum, and compound fuel (a mixture of gas oil fuel and fuel from heavier fractions in a ratio of 30:70), on the basis of their performance in a two-cycle YaAZ-204 engine. It is concluded that fuel from the heavier fraction of petroleum may be utilized with a slight increase in viscosity (12 cst or $\eta_{20} \cong 2$) and the absence of heavy tarry residues (95 percent vaporizes at 400°). Fuels from catalytic cracking with a cetane number of 40, in the pure state and mixed with fuels of direct distillation may be widely used in modern tractor engines. There are 4 tables, 6 figures and 6 Soviet references.

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Puchkov, N.G. and Rubinshteyn, S.F. Investigation of the Starting Qualities of Oils in Motor ZIL-120

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This article gives the comparative results of the role of the viscosity of oils at low temperatures in starting motors ZIL-120 and GAZ-51. The installation of a more powerful starter may increase the limit viscosity which fixes the flowability and starting temperature limits of the oil within the intervals 100 to 300 poises and 20-25 to 100 poises, respectively. Experimental data indicate that for these two large motors the minimum viscosity values for oil are 250 and 100 poises for flowability and starting respectively. There are 8 figures, 2 tables and 4 Soviet references.

Reznikov, V.D. On Methods and Extent of Motor Tests of Lubricating Oils

33

The author states that present methods of testing lubricating oils are neither satisfactorily accurate nor comprehensive in providing data which will aid in choosing the proper oil for a given motor. Proposals for improving these conditions are given. There are 7 tables and 6 references, of which 5 are Soviet and 1 English.

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Serov, A.V. The Basis for Methods of Short-term Tests for Evaluating the Wear-resistant Properties of Diesel Oils 46

In this article the author cites methods of evaluating wear-resistant properties of diesel oils on the basis of several considerations which are discussed at length. It is stated that determination of motor wear according to the amount of iron dissolved in the lubricating oil is quite possible. It is concluded that the basic factors determining the rate of motor wear are the rotational speed of the crankshaft, motor load, and temperature, although the influence of the latter is apparently less noticeable in diesels than in carburetor motors. There are 7 figures, 4 tables and 7 Soviet references.

II. INVESTIGATION OF PETROLEUM PRODUCTS

Zaslavskiy, Yu. S.; Shor, G.I.; Kirillov, I.G.; Lebedeva, F.B.; Yevstigneyev, Ye. V.; and Zlobin, O.A. The Application of

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Radioactive Indicators (Tagged Atoms) in the Investigation of
Wear-resistant Properties of Lubricating Oils

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The purpose of this investigation was to establish a rapid method of evaluating wear-resistant properties of lubricating oils by the use of radioactive isotopes. A motor part was exposed to an isotope, e.g., Co. ⁶⁰, and wear was measured by measuring the radiation intensity of the lubricating oil with a counter tube. A structural scheme is given for an automatic apparatus which will continuously record the radioactivity of circulating oil (thereby making "visible" the wear on components as it fluctuates with changing test conditions). There are 17 figures, 6 tables and 32 references, of which 11 are Soviet and 21 English.

Zaslavskiy, Yu. S.; Kreyn, S.E.; Shneyerova, R.N.; and Shor, G.I.. Radiochemical Investigation of the Action of Oil Additives

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This investigation concerned the capacity of additives to demonstrate an inhibiting action on oil during the operative process (i.e., to ensure an antioxidizing effect), or the capacity to prevent the catalytic influence of surface metal on the oxidation of oil. It was found that the protective coating, once having formed, later begins to decompose and erode, and is eventually washed off the metal surface completely; retardation of corrosion, therefore, is most effective during the formation of the protective coating. Engineers A.I. Kuznetsova, I.A. Morozova; Technicians M.B. Koziyenko, N.M. Avdeyeva,; and laboratory assistants P.I. Shishova and N.V. Dmitriyeva participated in the work. There are 16 figures, 1 table, and 14 references, of which 12 are Soviet and 2 English.

Zaslavskiy, Yu. S.; Shneyerova, R.N.; Shor, G.I.; and Kuznetsova, A.I. Radiochemical Investigation of the Stability of Solutions of Additives in Oils 107

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This investigation was made because of the need for additives that will not precipitate from oil under the influence of various factors. It was found that, by using tagged atoms in a method based on centrifuging, stability could be determined by measuring the radioactivity of the oil layers after centrifuging. Professor S.E. Kreyn acted as consultant in the work. There are 3 figures, 4 tables and 3 Soviet references.

Tilicheyev, M.D. Cryoscopic Methods of Analyzing the Hydrocarbon Content of Petroleum Products. I. Cryoscopic Methods of Analysis Without a Solvent 117

The author bases the method mentioned in the title on a principle of chemical thermodynamics which states that the temperature of crystallization of any solvent is lowered 1° by the same amount of any substance on condition that it is soluble in the liquid phase and insoluble in the solid phase of the solvent and forms an ideal solution with it.

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On the basis of this law, and by accurate determination of crystallization temperature, the author determines, and gives methods and equations for determining, a) the purity of individual admixtures (hydrocarbons), b) the quantity of individual admixtures, and c) the concentration of sulfuric acid. S.A. Yuganova participated in b), and V.P. Peshkov, Doctor of Physical and Mathematical Sciences, acted as consultant.

Tilicheyev, M.D.; Okishevich, N.A.; Borovaya, M.S.; and Goysa, Ye. I. Cryoscopic Methods of Analyzing the Hydrocarbon Content of Petroleum Products II. Cryoscopic Methods of Analysis Using Solvents 130

This article reviews the above-mentioned method in which the authors determine the amount of admixture by taking a solvent with a sufficiently high value and adding 1 percent mol of a substance. By observing the change in crystallization temperature of cyclohexane, it was possible to determine

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the amount of admixture with a degree of error of plus or minus 1 percent. This method and the chromatographic method were used to determine the amount of aromatic hydrocarbons in gasoline (with a degree of error of plus or minus .6 percent), the amount of nonsulfonated admixtures in different fractions of aromatic hydrocarbons, and the quantitative determination of aromatic hydrocarbons in petroleum oils in a solution of cyclohexane. V.S. Buk participated in the quantitative analysis of aromatic hydrocarbons in petroleum oil. There are 3 figures, 21 tables and 12 references, of which 9 are Soviet and 3 English.

Tilicheyev, M.D.; Goysa, Ye.I.; Tsyganova, Ye V. A Gravimetric Method for the Quantitative Determination of Aromatic Hydrocarbons in Light-colored Petroleum Products 148

This paper gives the results of tests of aviation gasolines, "Galosha" gasoline, and white spirit (a turpentine substitute) for the presence of aromatic hydro-carbons. Two variants of

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